

# INFORMATION LINK

## Information Services Division

April 1999

A source of information for our customers

Volume 99, Issue 2

### Development/Software Services

#### YEAR 2000 CONVERSION UPDATES

Vern Welder

**Mainframe Applications.** Year 2000 conversion of Information Services Division (ISD) supported mainframe systems was 96% complete as of March 1, 1999. This percentage will move slowly now as we start converting systems that will be re-written or replaced before the end of 1999.

**Application Development Tools.** ISD Software Development's next project for Year 2000 readiness is to assure the software products we use to develop and maintain systems are Year 2000 compliant. We plan to test our development software in a computer/network environment with dates rolled forward to 2000. This will be our assurance that we can support customers' mission critical applications if problems arise next January.

**COBOL II Program Conversions.** In January, we learned that our COBOL II compiler is not Year 2000 compliant. Most COBOL programs had been compiled using that compiler. The replacement compiler is COBOL for MVS. Our development teams are recompiling the COBOL II programs as they do system maintenance and, in some cases, they have recompiled complete systems just to get them converted. The re-compile process is planned with our customers to assure that system users can plan to test the applications if they wish. The conversion process has been going very well with few problems encountered.

If your agency decides that a mainframe

system currently categorized as obsolete will be retained for use beyond December 31, 1999, contact Greg Grube at 328-2982 to schedule these projects.

### MEDICAID/TANF PROJECT

Vern Welder

The Department of Human Services (DHS) and ISD started a project to enhance DHS's ability to determine Medicaid eligibility for Temporary Assistance for Needy Families (Medicaid/TANF). The project will be completed in two phases. It is scheduled for final completion by April 2001. The project will have 26 ISD developers and consultants working along side DHS central office and county employees. The project is an enhancement to the current Training, Education, Employment and Management (TEEM) system and will be developed with Sterling Software's Cool:Stuff software development tools. Project organization follows a template developed by ISD and DHS. A project management consultant has been engaged to implement project management processes and to provide quality assurance throughout the project.

### Administrative Services

#### RECORDS MANAGEMENT CELEBRATION

Becky Lingle

ISD Records Management will join the Association of Records Managers and Administrators in their national celebration of Records and Information Management Week, April 4 - 10, 1999.

Organizations and government entities across the nation will celebrate with a variety of activities and events.

Governor Ed Schafer proclaimed the week of April 4 - 10 as Records and Information Management Week for North Dakota. Records Management is scheduling tours and training sessions in areas related to records management.

The tours include imaging, open-shelf filing, and archival storage. The training includes sessions on records management and e-mail. The records management training will be offered twice for records coordinators or others who are interested in attending. At the e-mail session, participants will have the opportunity to view "The Plugged-In Mailbox" video and discuss retention and policy issues regarding e-mail records.

Records Management will sponsor a "Records Disposal Contest." The agency disposing of the largest volume of records, according to their retention schedule will win. Public Employees Retirement System (PERS) was the winner last year for disposing of 1,794 inches of obsolete records. Congratulations PERS!

All tours and training sessions are free. If you are interested in participating in any of these opportunities, please call Becky Lingle at 328-3585 to register.



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## CALL BLOCKING TO HIGH TOLL FRAUD COUNTRIES

Judane Ohlhauser

AT&T has taken steps to protect us from fraudulent calling-card calls. In 1998, AT&T detected an increase in unauthorized calls placed to high toll-fraud countries using the SDN Network Remote Access (NRA) Option II feature. This is the specific toll-free number we use to access our network when making calling-card calls.

AT&T instituted a policy of blocking certain NRA Option II calls to a small number of high toll-fraud countries. This blocking will only affect calls that are terminating in these high toll-fraud countries. It is not applicable to calls originating in those countries, like AT&T Direct service. AT&T will do ongoing analysis of the fraud data, so the list of high toll-fraud countries will change. The list of impacted countries will not be shared for security reasons.

If your agency needs to place remote access calls to high toll-fraud countries, please contact Judane Ohlhauser at 328-2343 or e-mail [johlhaus@state.nd.us](mailto:johlhaus@state.nd.us). There is a process in place to lift the restrictions if necessary. The restrictions should be lifted only for specific cards with a legitimate need to call high toll-fraud countries. AT&T does not recommend unblocking all cards.

### "INFORMATION LINK" AVAILABLE ON THE WEB

Copies of the ISD "Information Link" newsletter are available on ISD's web site at <http://www.state.nd.us/isd/newsindex.html>. The newsletters are in PDF format and may be viewed using Adobe's Acrobat Reader.

ISD has set up an electronic mailing list that will notify subscribers by e-mail when new issues are available. If you prefer to be notified by e-mail rather than receive a hard copy of the newsletter, send an e-mail to [Darlene.Wolfgram](mailto:Darlene.Wolfgram) at [dwolfgra@state.nd.us](mailto:dwolfgra@state.nd.us). Please include your name, agency, department number (if applicable), and e-mail address.

## Computer Support Services

### ISD SURPASSES THE TERABYTE MARK FOR THE S/390 SERVER

Dean Glatt

By today's standards, 1.2 terabytes (1,200 gigabytes) is no longer any type of threshold that amazes too many people in information technology. In March 1999, ISD will bring on-line disk systems which will expand the storage of the S/390 server. The Redundant Virtual Array 2 (RVA-2) is a high-speed RAID-6 system. RAID is a disk technology that allows hard-drive systems to fail and minimize loss of data. The number after RAID is the level being implemented. Level 6 indicates that the RVA is totally redundant not only in the hard drives, but also in the controllers and power supplies that run the hard drives. The typical hard drive crash that has plagued computer systems in years past has been reduced to a level of years between failures that cause total system failure. What this means to you is higher and higher availability for your applications.

This system will eventually participate in a Storage Area Network. With advancements in hardware, we can add equipment that will allow our AIX, AS/400, S/390 and Windows NT servers to connect directly to this system. What this means for state government data is the ability of server data consolidation with redundancy and disaster recovery of the highest standards.

The S/390 currently serves thousands of users with such applications as Lotus Domino, World Wide Web servers, client/server applications using Oracle and DB/2 databases and legacy applications.

## E-MAIL: BE PART OF THE SOLUTION!

Gary J. Vetter

The "Forward" button seems harmless enough. With a click of the mouse, a message can be sent through the Internet to hundreds of people at no apparent cost. Yet consider the following situation. If each recipient forwards your message to ten other people, the ninth iteration will result in a billion e-mail messages!

If your message contained useful information, like a cure for baldness, then the fact that it went to a billion people is wonderful. (Don't forget to forward me a copy!) However, if your message was more along the lines of a chain letter, a get-rich-quick scheme, or a hoax virus warning, then the results are not as desirable.

Because of their size, messages with attached files are of particular concern. During the Christmas and Valentine's Day seasons, thousands of TREE.EXE and VAL.EXE greetings were bounced around the State's e-mail system. As a result, the delivery time for messages was substantially delayed.

E-mail is an excellent communication tool, and I would be the last person to discourage its use. Yet every message consumes resources and resources have direct costs. As legitimate e-mail is forced to compete with "junk" for resources, the cost per message rises. Be aware of the messages you send and be conscious of their impact on others. Ultimately, the only solution is for everyone to use e-mail as responsibly as possible.



## ISD EMPLOYEE PROFILE



**Name:** Barb Zander

**Job Title:** Technical Support Specialist

**Section of ISD:** Technical Support

**Job Responsibilities:** Install, monitor, tune, maintain, and troubleshoot OS/390 server software and hardware.

**Years at ISD:** 18 years as of June 1998

## JUNK MAIL, SPAM AND THE STATE OF NORTH DAKOTA

Jeff Carr

Junk mail is one of the annoying features of life in the late 1990's. Whether it is the unsolicited appeal for funds that appears in your U.S. Postal Service mail box at home or the unsolicited get-rich-quick scheme that appears in your e-mail account, junk mail is a waste of your time. Fortunately, there are costs that place limits on the volume of junk mail delivered by the U.S. Postal Service. Mail delivered by the U.S. Postal Service requires the sender to pay for the paper, envelope, and postage for each message sent. Unfortunately, an almost limitless amount of junk e-mail, nicknamed spam, can be composed, sent, and delivered for little more than the cost of a monthly dial-up Internet account, typically \$20 per month. This economic reality has driven a huge increase in the amount of junk e-mail, or spam, on the Internet in the last 2 years.

This is not to say that spam e-mail is free, but just that the cost burdens of spam fall on the system that receives the junk e-mail. The receiving system must process, store, and then deliver the spam e-mail to the addressee. For businesses that handle large volumes of e-mail, such as AOL, WebTV, att.net, or ibm.net, the expense of handling spam is a significant, measurable cost of doing business. Naturally these businesses are seeking ways to reduce this cost.

The tools that are available to reduce the costs of spam are limited. While AOL or WebTV could theoretically "read" each piece of e-mail and discard messages that were judged to be spam, their customers would surely not tolerate such practices, to say nothing of the possible legal issues such an action would entail. Currently, the only way for businesses like AOL or WebTV to reduce the amount of spam they receive is to blacklist the sender. For example, imagine that WebTV's customers complain about receiving spam that appears to come from pioneer.state.nd.us. WebTV will place pioneer.state.nd.us on the blacklist, and no e-mail sent from pioneer.state.nd.us will be accepted for

delivery by WebTV.

During the first week of February 1999, one of the 29 e-mail servers in the State of North Dakota's network was used by unknown individuals as a spam distribution center. The spammers were not North Dakotans, but were Internet users that took advantage of the server's configuration to forward their spam. This forwarding process served to evade the blacklist policy of organizations like AOL and WebTV and permitted the successful delivery of the junk e-mail. This abuse of state resources caused WebTV to refuse any mail that was sent through any of the state e-mail servers. Gone uncorrected, more and more sites would have refused mail sent from the offending server, and perhaps the entire state network.

Of the 29 e-mail servers within the state network, 13 could have been used as a spam distribution center by anyone with an Internet account. The simplest way to prevent the use of any of these servers as a spam distribution point involves re-routing all e-mail that is incoming from the Internet. An e-mail relay system is being

deployed that will accept all e-mail addressed to any of the state e-mail servers and pass it on to its final destination. This system does not affect internal e-mail in any way and only takes part in delivering mail that is incoming from the Internet. Since the e-mail relay system will handle all incoming Internet mail, we will solve the spam problem by configuring the e-mail relay system to prohibit the passage of spam.

On February 12, 1999, the first phase of the mail relay system's installation was complete and, as a result, WebTV lifted the blockade on mail sent from the state network. Our e-mail is once again being accepted everywhere.

While our Internet e-mail relay system will prevent the use of state resources to send spam to others, it will do nothing to change the amount of spam we receive. If every site on the internet implemented the policies that ISD is in the process of deploying, everyone on the Internet would receive less junk e-mail. Until that day, we have merely acted as responsible citizens.

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## WOULD YOU LIKE A FASTER INTERNET?

Jeff Carr

Who wouldn't? I know I get impatient while waiting on that seemingly snail-like progress bar on the bottom of my browser window. Most of the causes of slow web browsing speed are outside of our control. However, we can take advantage of the fact that our state data network is faster than the Internet.

Imagine that your web browser is configured so when you request a remote web page (for example, [www.yahoo.com](http://www.yahoo.com)) your browser does not contact [www.yahoo.com](http://www.yahoo.com) directly, but instead directs the request to a specialized computer called a Web Cache Server. The Web Cache Server receives this request and looks through a local store, or cache, of web pages it maintains. In this example, imagine the page for [www.yahoo.com](http://www.yahoo.com) is not in the server's local cache of web pages, so the Web Cache Server requests the page from Yahoo, returns the requested page to your browser so you may see it, and stores a copy of the requested page in the Web Cache Server's local store of web pages.

So far, this process has not increased the speed of your Internet access. But imagine the next time that you or anyone else utilizing the Web Cache Server requests [www.yahoo.com](http://www.yahoo.com). This time, the Web Cache Server finds the page in its local cache. Then, the Web Cache Server asks Yahoo if the web page has changed since the Web Cache Server stored it. If the answer is no, the Web Cache server returns the locally stored copy of the web page to your browser, saving the time it would take for that web page to travel across the Internet. If the answer is yes, the Web Cache Server retrieves the page, returns the page to you, and stores it in its local cache.

(Continued on back page)

The increase in Internet speed offered by using a Web Cache Server results from the requests it can serve from its local cache; *i.e.* from those requests where the remote web page does not have to travel the Internet. This is not surprising and, in fact, your browser is already doing this on a small scale. Because the Web Cache Server has just one purpose in life, to cache Web Pages, it can perform the task tens, if not hundreds, of times more efficiently than your browser. Much of this speed increase results from the shared nature of a Web Cache Server. Your browser can cache only those pages that you have visited, while the Web Cache Server caches the pages of all the browsers participating in the caching system. This means if I recently requested [www.yahoo.com](http://www.yahoo.com) and then you request [www.yahoo.com](http://www.yahoo.com), the Web Cache Server will serve your browser the cached version, meaning you receive the page much more quickly. You benefit from my surfing the web.

This is one of the key features of a Web Cache Server. The more people that use it, the faster the World Wide Web is for all of them. ISD is in the process of setting up a Web Cache Server which will be available by May 1, 1999. When it becomes available, I urge you to try it – the increase in speed can be phenomenal. Instructions on how to become a member of the Web Cache system will appear in the next newsletter, as well as being distributed to all IT coordinators when the system comes on-line.

The decision to participate in the Web Cache system is voluntary. The increase in speed offered by the system will make it very desirable, but no one is going to force you to participate. Consider it as a service ISD offers to those who want a faster Internet.



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Anyone interested in contributing information or would like to be added to the mailing list should contact the editor at North Dakota Information Services Division, 600 East Boulevard Avenue, Bismarck, ND 58505-0100, (701) 328-3190. FAX: (701) 328-3000.

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